

The Journal of Educational Issues of Language Minority Students, v14 p. 185-210, Winter 1994.

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# INFANT DUAL LANGUAGE ACQUISITION REVISITED

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Note: Every attempt has been made to maintain the integrity of the printed text. In some cases, figures and tables have been reconstructed within the constraints of the electronic environment.

The influx of refugees and immigrants into the U.S. and other countries during the twentieth century has given rise to an urgent need for dependable qualitative research in infant bilingualism. Findings of ethnographic case studies primarily based on developmental observations in natural environments can serve as linguistic, sociolinguistic, psychological, and anthropological ingredients for planning and developing materials for teaching language and culture in general and second language in particular. For example, Professor Werner Leopold's early call to language researchers for a serious study of child language and infant bilingualism voiced in 1945 was one of the first to receive positive responses from inquirers about children's language. Researchers have spent much of their time and patience making on-the-spot observations of natural bilingual speech in the making in immigrant families.

## **A Preliminary Research Step: Term Definitions**

Prior to making observations for collecting field data, there is a need to define or clarify some terms that cover a specific study area. Language acquisition is a natural developmental process of gaining knowledge and mastery of a speech system in a living environment. An utterance is a speech item, a spoken word, or what is said (Pham, 1989). A speech act is an action performed by a speaker when an utterance is issued (Austin, 1962). The setting indicates the surroundings or environment, the locale or milieu, in which language acquisition occurs and develops (Random House, 1968). Discourse is the flow and the structure of a conversation or topics within it. Discourse analysis examines rules of language use which are indicative of how utterances perform social acts (Widdowson, 1973). An infant is a child during the first four or five years of life. Infancy represents early childhood in which language development is in its primary stage. A functional approach to languages means seeking to explain the nature of language in functional terms: seeing whether language itself has been shaped by use, and if so, in what ways and how the form of language has been determined by the functions it has evolved to serve (Halliday, 1973). A pragmatic approach to languages deals with the study of the language signs as a dynamic acquisition process and the interplay between cognition and socialization (Arwood, 1983).

## **Highlighting the Significance of a Child Language Study**

Prior to scheduling observational studies, an indepth exploration of the significance of the research project is essential; that is, the researcher needs to seek to understand why the study is important. For example, the

researcher decides to carry out a naturalistic case study of the emerging patterns of the speech of a Vietnamese American infant acquiring English and Vietnamese at the same time. Such a study is helpful, particularly at a time when the learning of English by immigrant children becomes an important instructional issue or concern for educators in today's multicultural school and society. Such a study will significantly contribute to the treasure of research on bilingualism. It can serve as a reference for designing and planning communication-based preschool, kindergarten, and primary-level instructional and counseling methods, strategies, and materials, particularly in the area of teaching children and counseling families experiencing dual language acquisition and a bicultural orientation. Parents of bilingual children may use this study as a reference in assisting or facilitating language acquisition. Linguistic and sociolinguistic information from the inquiry will contribute important insights for the implementation of language programs and curriculum policies for the benefit of nonnative children. This study will be profitable to bilingual and ESL students and ESL/EFL teachers with specialized training and assignments in instructing limited English proficient learners, especially those of Asian Pacific origin. It will be beneficial for educationally involved parents of bi/multilingual and bi/multicultural children. Administrators of special language programs, directors of instruction of child care institutes, curriculum planners, school policy makers, and instructional material researchers and developers will also benefit from the study. The study could also shed significant light on such issues as immigrant families' concerns about whether they will accept, learn, and use English as their exclusive language at home, at school, and in the community or whether they will accept and acquire two languages and two cultures at the same time; teachers' accuracy in testing, screening, identifying, and placing school children upon admission; parents' decision-making process concerning language planning and the choice of appropriately-targeted caregivers and care centers; and of specific ways to culturally and linguistically orient the child in dealing with the daily environment. The findings of the study can be compared to those of bilingual studies or case histories of other languages for better understanding of universal strategies and processes of infant bilingualism.

### **Major Issues of Child Dual Language Acquisition**

Several points of dual language acquisition study are to be examined to gain a broad view before tackling the narrowed area of investigation. The basic different viewpoints are presented below.

#### **Native Language Foundation**

Cooley (1979) and Cummins (1981) found that the amount and quality of first language use in the home have been shown to be associated with student readiness for the academic demands of schooling and continued primary language development in the school. A native language foundation can serve as a support for learning English as a second language. It makes the learning process easier and faster (Cummins, 1984).

#### **First Language Monolinguals' Vocabulary Development**

Most young children have vocabularies that largely consist of nouns together with a few verbs and adjectives. For a large minority, however, early vocabularies included a number of formulas or social routines such as "I want it" or "Don't do it" (Nelson, 1973). There is a difference in the frequency of noun use between pairs of children matched on mean length of utterance but differing at least six months in age (Horgan, 1981). Children between the ages of 1 1/2 and 6 years quickly acquire an extensive vocabulary and learn to comprehend over 14,000 words (Templin, 1957) or an average of about nine new words per day (Rice & Woodsmall, 1988). They absorb new meanings as they encounter them in conversational interactions (Pinker, 1984).

## Second Language Learning

Shapira (1976) found that second-language child learners, like their first language counterparts, generate rules from speech they are exposed to in natural environments. Preadolescent children who begin to develop speech inhibitions may face more difficulty in learning a second language than younger ones (1976).

## Simultaneous Acquisition Strategies

**Separate Contexts for Separate Languages:** Young children who learn two languages simultaneously acquire them by distinguishing two distinct contexts for the two languages such as home/neighborhood, home/school, or mother/father. Children generally do not experience difficulty discerning the separateness of such contexts, though sometimes acquisition in both languages is slightly slower than the normal schedule of first language acquisition (Brown, 1980). This bilingual activity does not retard intelligence (Lambert, 1962).

**No First-Language Interference:** Children who learn two languages simultaneously experience no first-language interference. This was demonstrated by Rebecca, a three-year-old child acquiring English and Urdu at the same time. Similar strategies for acquiring both the first and second languages were reflected in the child's acquisition of such structures as possession, gender, word-order, verb forms, and interrogative forms (Hansen-Bede, 1975).

**Prior Knowledge and Concept Learning:** Like first language learners, second language learners make use of prior knowledge, skills, and tactics (Ervin-Tripp, 1974). Concepts are learned almost simultaneously in the two languages when the linguistic forms are similar (Imedadze, 1960).

**From Merging to Separating:** Simultaneous acquisition in child language begins with the two languages being merged and mixed with each other, then gradually being refined into two separate systems by age two. The process is a natural one. It is not a form of interference since the concepts in both languages are just starting to develop in a similar way (Burling, 1959; Imedadze & Uzuadze, 1967; Leopold, 1945). The functional autonomy of the two language systems emerging at a definite stage in the child's speech development is determined by the evolution of two distinctive sets of language patterns that are alternatively actualized (Imedadze, 1960). Imedadze observed this process in a child from the beginning of his active speech up to the age of four, in the condition of simultaneously mastering Georgian, spoken with him by the mother and the father, and Russian, spoken with him by the grandmother and nurse.

**Interlanguage Transfer:** Garcia and Madrid (1980) studied the interlanguage transfer phenomenon in English/Spanish home environments. Their subjects were four Mexican-American children ranging in age from four years, three months to four years, eight months. They experimented with two specific second language training strategies: independent first and second language training (introducing training in a second language without regard for first language maintenance) and simultaneous first and second language training (introducing training in a second language while at the same time providing a maintenance procedure for the first language). Because subjects indicated a high level of expressive competence on prepositional labels in first language, the effect (both direction and form) of training or learning a second language was provided during training in second language prepositional labels. A cause-effect analysis between language interaction was attempted by manipulating linguistic responses in second language and monitoring effects of this manipulation in first language. This study led to the following findings:

1. Expressive acquisition of prepositional labels in second language occurred for both language training groups.

2. This acquisition led to a distinct change in the expressive use of the corresponding prepositional label in first language during the independent second language training.
3. This change was characterized by second language substitutions on occasions calling for first language responses.
4. No such effect occurred during simultaneous first and second language training.
5. No such effect was observed for receptive responses.

Influence of caretakers: Fantini (1974) examined his son Mario's dual language acquisition from infancy through his tenth year. His research on Spanish/English bilingualism was based on data obtained through taped recordings and a speech diary he maintained throughout this period. He described the role of the child caretaker relationship as follows:

1. Children want to learn the language of their conversation partners (e.g. their parents, their caretakers).
2. Children's initial attitudes toward their bilingualism are strongly influenced by the examples of their caretakers.
3. The caretakers' attitudes are an important factor affecting code-switching.

Like Fantini's, my (1989) studies of infant bilingualism also emphasized the influence of the caretakers' vehicle language, guidance, and prompting upon the growth of the child's speech and conversational style.

Studies of language acquisition have relied almost exclusively on home observations of naturally occurring parent-child verbal interactions (e.g. Brown, 1973; Whitehurst & Valdes-Menchaca, 1988; Pham, 1989). Bloom, Lightbown, and Hood (1975) pointed out the importance of parents' interaction styles. Della Corte, Benedict, and Klein (1983) used correlational data to explain the influence of parents' speech style. Lieven (1978) agreed with Della Corte et al. (1983) on their finding that differences in acquired language and caretakers' interaction patterns caused different acquisition styles. Fantini (1974) found that children's speech styles are marked by consistent patterns of linguistic modifications related to specific social contexts and that they appear to be rooted in the social context, reflecting social interaction between children and other speakers.

In learning language, children develop syntactical structures through interaction with adults. These structures are called "vertical constructions." For example, Brenda, a child, says, "Hiding." Adult: "Hiding? What's hiding?" Brenda: "Balloon." Children's "horizontal" structures develop out of the "vertical" structures of the interaction with other children or with adults (Scollon, 1974). Hatch (1976) also found "vertical constructions" in Itoh's second language acquisition data collected from Takashiro, a 2 and 1/2 year old native speaker of Japanese, who showed a mixture of both simultaneous acquisitions and sequential acquisition.

## **Television as a Source of Language Learning**

Rice and Woodsmall (1988) conducted an experimental study of children's language learning when viewing television. They cited several inquirers who found that television as a possible source of language learning is generally overlooked or summarily dismissed (Clark & Clark, 1977; Hoff-Ginsberg & Shatz, 1982). They noted that in the home, when the TV is on, children look at the screen 6% of the time for age 1, 56% for age 3-4, and 70% for 5-6 year olds (Anderson, Lorch, Field, & Nathan, 1986). They found that in home settings parents intuitively respond to television as a language-teaching device for their toddlers who view it and that parents use the medium, particularly "Sesame Street," as a talking picture book for their children (Lemish & Rice, 1986). I (1989) also noted the important role of TV viewing in children's language learning process in home settings. Children can pick up phonologically complicated words at an early age as a result

of the repetitive effect of TV commercials. In my observational study of dual language acquisition by my three-year-old nephew named Linh, a Vietnamese-American bilingual child, I considered television viewing as one form of observable child environment interaction that affects the process of speech development and language learning, especially in a family setting where watching television occupies a considerable amount of family time. I also observed babysitting settings in one American family and noted that the infant's father's last act before leaving home for work was to hand the TV remote control to the babysitter; the two-year-old infant enjoyed his favorite video cartoon and viewed it so much that he knew the words and the songs by heart.

### **Function of Language in Discourse**

Hatch and Long (1980) asserted that discourse analysis is close to sociolinguistics because it focuses on real tasks undertaken by human beings in social interaction. Hatch (1978) emphasized the study of "how" children learn a language through discourse analysis, and in particular, conversational analysis. According to her, it is essential for the language acquisition researcher to observe and analyze the process in which child language learning evolves out of learning how to carry on conversation.

I (1989) focused my observational study on the significant features and patterns discovered in the bilingual discourse of a Vietnamese-born child. I tried to answer the following questions related to the communicative function of the child's language:

1. What did the child know and learn about talking with others in home and community environments?
2. What did he know and learn about connected pieces of English and Vietnamese discourse?
3. What was the interaction between listener and speaker (involving himself and his entourage)?
4. What were the conversational cues in his bilingual communication?

I (1989) noted that the level, rate, and extent of the child's parental involvement, motivation, and interaction are significant factors in enhancing his language development.

Peck (1976) identified the conversational patterns of Angel, a native speaker of Spanish, who came to Los Angeles from Mexico City at age 7 years and 4 months with his parents and two younger brothers. She described the child and his speech partners as "cooperative conversationalists," who looked for discourse patterns appropriate for their conversational interaction.

The functional level of discourse regulates any verbal interaction, and an exploration of functions will result in the understanding of what goes on between speaker and listener (Brown, 1980; Kramsch, 1981).

Piaget (1926) noted that most of infants' speech addressed to each other consists of "unsocial speech," that is, children do not obey such discourse rules as the necessity of responding to the other's topic or nominating a relevant topic to which the other child can respond. This viewpoint was not compatible with that of Keenan (1974) concerning relevant responses in infant conversation.

Klee (1984) noted that discourse analysis has not only revealed evidence of the high degree of structuring in everyday conversation but has also provided a new and broader direction in studies of child language acquisition and classroom research.

### **Analysis of Conversation**

Goffman (1976) proposed a set of "ritual constraints" in addition to universal system constraints on communication. System constraints in conversation are such universal systems as the opening, the closing,

the turn-taking, and the rerun relating to handling conversations in different languages and cultures. Ritual constraints are the conversationalist's strategies to regulate communication and protect feelings. For example, instead of asking their mother to prepare a bottle of milk by saying, "Give me some milk, Mom," children try to communicate their requests or demands by saying tenderly, "Mom, I'm hungry," or "Mom, it's time for milk." In a more strategic manner, adults usually apologize for interrupting by saying, "I know how busy you are," instead of stating directly, "Sorry for interrupting you."

### **Analysis of Speech Acts**

Austin (1962) studied meaning and reference by focusing on a group of sentences that he labelled "performatives," in which the saying of the words constitutes the performing of an action. According to Austin, all utterances are performative and in issuing an utterance, a speaker can perform three speech acts simultaneously: a "locutionary" act, which is the act of saying something in the full sense of "say"; an "illocutionary" act, which is an act performed in saying something; and a "perlocutionary" act, the act performed by or as a result of saying. For example, the child's utterance "My stomach hurts" is not only a telling statement, an act of talking about his stomach ache, but it is also a warning for his parents, an act performed in making the statement. Moreover, as his utterance aims at alarming his parents or causing a change in their minds, it is a "perlocutionary" act as well (i.e. urging them to take him to the doctor or give him some medicine).

Searle (1969) joined Austin in exploring the notion of illocutionary acts. He distinguished between the regulative rule and the constitutive rule that govern illocutionary acts. Regulative rules govern the initial exchange of greetings between speakers and regulate the turn taking, the negotiating for understanding, and other tactical operations relating to verbal exchange. Constitutive rules govern the way in which a given utterance of a given form realizes a given illocutionary act. They determine the choice of verbal and nonverbal behavior made by the speaker. Both types of rules are the foundations of verbal interaction which is the target of discourse analysis (Kramsch, 1981). According to Searle (1969), a series of speech acts creates a speech event.

Arwood (1982), in an attempt to deal with the assessment of the speech of language-disordered children, stated further that speech acts may still be performed without Searle's synergistic constituents. The synergistic system is a speech act system in the child-adult interaction which is characterized by the interrelationships between audition, cognition, and socialization. Arwood found that children can truly learn from their speech acts only when there is a true interaction, that is, when two partners are involved in a system of exchange. He also noted that children's nonverbal systems are unique systems which can organize their partner's systems. In other words, it is also part of a greater system of contextual acts.

### **Syntax, Semantics, and Pragmatics**

In my (1989) search for the emerging functional patterns in a bilingual infant, I agreed with Meyer (1986) on the interrelationship of the three levels of language: syntax (the study of the internal relationships between signs and their meanings), semantics (the study of the relationships between signs and their meanings), and pragmatics (the study of the relationships between signs and their users). He assumed that these dimensions of language or speech cannot be isolated because functions and contexts cannot be significantly defined and described apart from both semantic and syntactical constituents.

Pragmatism plays an important part in child language research. It approaches an individual's system of speech acts as synergistic in nature--semantic in nature and social in origin. In the case of an infant, the

synergistic system can be described as a speech act system between the child and a caregiver through which he is able to develop semantically in relation to his environment.

Larsen-Freeman (1980) noted that speakers demonstrate their knowledge of the pragmatics of the language while communicating with others. For example, when they address such a question as "How are you?" (considered to be more formal than "How's it going?") to someone, they demonstrate their pragmatic competency that can be described as follows:

1. They are aware of the linguistic communicative function of opening a conversation.
2. They are able to use a conversational opening appropriately in a particular context (the listener is someone they presume to have a social status superior to their own).
3. They really mean "Are you in good health?" rather than merely exchanging a meaningless greeting.

## **Ethnography of Speaking**

Ethnography of speaking aims at describing and systematizing the interpretive rules used by members of a given speech community. Ethnographers of speaking or ethnomethodologists investigate both language structure and language use, exploring rules of speaking, i.e. manners of speaking, modes of speaking, message forms, speech events, settings, purposes, and channels of communication (Hymes, 1971, 1972).

## **Categorization of Utterances or Speech Functions**

Dore (1975) stated that children's utterances were realizations of one of nine primitive speech acts: labelling, repeating, answering, requesting (action), requesting (answer), calling, greeting, protesting, and practicing.

Halliday (1973) pointed to six functional categories as descriptive factors interpreting the child's early communicative system: instrumental (I want), regulatory (Do as I Tell You), interactional (Me and You), personal (Here I Come), heuristic (Tell Me Why), and imaginative (Let's Pretend). According to Halliday, language is understood as meaning potential, and the meaning potential that they are building is a measure of what they can do with language. This semantic network is a specification of language and a hypothesis about patterns of meaning. The linguistic realization of patterns of behavior or social meaning is open ended. In the sociological context, the extralinguistic elements are the behavior patterns that find expression in language. Language functions in types of personal interaction (social) and types of situations or settings (situational) in which language functions. The function of the semantic network is to show how these social meanings are organized into linguistic meanings. Social meanings or behavior patterns are specific to their contexts or settings.

Keenan and Klein (1975) pointed out five categories of response in the interaction between children: (a) basic acknowledgment or direct repetition, (b) affirmation or explicit agreement, (c) denial or opposition, (d) matching or claiming to be performing a similar action, (e) extension or new predication to previous speaker's topic.

Garvey (1975) stated that when children learn to talk, they learn how to interact. In their interaction they develop solicited and unsolicited queries. Solicited queries seek mutual rapport whereas unsolicited queries seek mutual understanding. According to Garvey (1975), children make use of the following functions by the age of five and half: (a) getting attention, (b) taking turns, (c) making relevant utterances, (d) nominating and acknowledging topics, (e) ignoring and avoiding topics, (f) priming topics, (g) requesting clarification.

Using the ideas and concepts of Halliday (1973), Dore (1975), and Keenan and Klein (1975) as a guiding

perspective, I (1989) worked further in my search for a comprehensive network of functional patterns reflected by the three-year-old child's bilingual speech. I pointed out twenty-one functional patterns that differed by language setting and language partner: greeting; affirmation or declaration; calling, asking, or questioning; answering or responding; negating, refusing, or denying; requesting or demanding; exclaiming, insisting, or emphasizing surprise or astonishment; praising or expressing love or affection; expressing fear or horror; mischief-making; agreeing or approving; disagreeing or disapproving; complaining, expressing anger or dissatisfaction; expressing possession, cultural communication, or orientation; and using higher thinking or reasoning skills.

In the direction of studying infant bilingualism, I (1989) analyzed the extent to which the bilingual child used Vietnamese and English and discovered eight Strategies of Dual Language Use (SDLU): (a) separate use in most cases and mixed use in some cases of each language, (b) preference for use of the language used by the partner in communication, (c) retention of an initially acquired item, (d) preference for use of the language used by the asker to respond to a question, (e) use of each language in proportion to the amount of exposure to it, (f) partially suspended use of either language due to temporary or incidental absence of exposure to it, (g) occasional mixed use of both languages, (h) parallel use of both languages in occasional semantic decodings.

### **Ethnographic Method**

Spradley (1980) initiated an ethnographic method involving different levels of data-collecting observation: descriptive, selected, and focused. Smith (1978) recommended a checklist of criteria for checking the validity of participant observation: (a) quality of direct on-site observation, (b) freedom of access, (c) intensity of observation, (d) triangulation and multimethods, (e) sampling of data, and (f) unobtrusive measures.

Data can be utilized, categorized, and analyzed by means of domain, taxonomic and componential analyses (Spradley, 1980). Lincoln and Guba (1985) suggested number checking, keeping a field journal, and data triangulation as measures to insure research trustworthiness. The suggested field journal consisted of at least three forms of notes: (a) a log of day-to-day observational and data-gathering activities, (b) a personal log in the form of a diary that included reflexive and introspective notations about the state of the inquirer's mind in relation to what was happening in the field and a record of hypotheses and questions that were useful for follow up, discussions with the infant subject's parents, caretakers, or both, and (c) a methodological log that recorded all decisions made in accordance with the emergent design.

Triangulation of the data involves validating a piece of data against another source (for example, a second observation), a second method (for example, an interview with the father, the mother, or the babysitter in addition to an observation of the child), or both.

### **Photography and Videography as Data-Collecting Instruments**

I (1989) used still and video cameras as supportive tools of data-gathering besides scheduled field notes and field audiotapings. The unique agility and flexibility of the still camera in revealing a rich fabric and texture of complexity in one brief moment, which can then be examined again and again, exceeds the ability to commit the moment to paper during and after studying a socioeducational setting (English, 1988).

### **Case Study as Methodological Framework**



"The researcher may choose to use the case study method in order to achieve the aim of obtaining an in-depth understanding of a single domain of the subject under investigation. When the aims of an inquiry are understanding, extension of experience, and increase in conviction in that which is known, the case study method of research is particularly apropos" (Stake, 1978). A case study is a research study that aims at analyzing a phenomenon in its real-life context. Goode and Hutt (1982) stated that the case study research method is a way of organizing social data so as to preserve the unitary character of the object being studied. Nachmias and Nachmias (1976) believed that the case study method is helpful in generating hypotheses and in suggesting extended research.

### **Child Language Acquisition Case Studies Revisited**

The metaanalytic tabulation in Table 1 sketches the trends of previous dual child language acquisition case studies dealing with various areas: phonological, morphological, lexical, syntactical, and functional.

Table 1 revealed that the most commonly studied areas were phonology, vocabulary (lexical items), and syntax. There is, therefore, much to be studied and explored by future researchers in the area of the communication-based functional approach to language acquisition. The following findings (Table 2) obtained from previous studies will be of basic help for beginners in observing and investigating infant bilingualism.

The summary of child language acquisition research showed that many of the language investigators studied simultaneous rather than sequential acquisition. They found to a significant extent uneven development of the two languages. Imedadze (1960) presented set theory as a basis of language use while Huerta (1977) explored code-switching in infant bilingualism. The case study conducted by Itoh and Hatch (1972) revealed both sequential and simultaneous acquisition, whereas Peters (1977) attempted to depict speech development styles in communicative interactions. Wells (1983) studied language at home and at school while Klee (1984) made a discourse analysis of the oral language interactions of Spanish/English bilingual children in three environments: play, home, and classrooms. Both Halliday (1973) and Dore (1974) analyzed and classified functional categories of child speech acts whereas I (1989) explored an area similar to that studied by Peters (1977) in an effort to understand how two languages develop at the same time or nearly at the same time in a Vietnamese child born of Vietnamese parents and experiencing verbal interactions in his bilingual environment and presented a set of functional patterns in infant bilingualism.

These studies and theories revealed that the prospect for child language acquisition research are boundless. Future inquiry designs can tackle such problems as comparing the process of dual language acquisition by a child with second language learning, comparing children of the same age having different experiences of dual language acquisition, comparing infant bilingualism in different settings and in different interactions, comparing parental styles of teaching language to their children, comparing caretakers' strategies of guiding and gearing infant language, exploring the rate of linguistical and cultural awareness, exploring the process of bicultural orientation, exploring the extent to which family expectations and plans help foreign-born children learn their native language in the U.S. and maintain it until adolescence and adulthood, exploring the role of reading and writing as other developmental areas of child language, studying the process of children's shift from listening and speaking to reading and writing, studying the process of transition from home to school associated with the transition from oral to written language and studying other countless areas of psycholinguistics, sociolinguistics, ethnography of speaking, linguistics, applied linguistics, anthropology, and educational psychology and sociology related to or associated with simultaneous child language acquisition.

*Table 1*  
*Focuses of Child Language Acquisition Research*

| Researchers         | Focuses of Child Language Acquisition Research |            |            |        |           |                                |
|---------------------|--|------------|------------|--------|-----------|--------------------------------|
|                     | Phonology                                      | Morphology | Vocabulary | Syntax | Semantics | Functions & Discourse Analysis |
| Ronjat (1913)       | X  |            | X          | X      |           |                                |
| Leopold (1939 1940) | X  |            | X          | X      |           |                                |
| Burling (1959)      | X  | X          | X          | X      | X         |                                |
| Imedadze (1960)     | X  |            | X          | X      | X         |                                |
| Itoh & Hatch (1972) | X  |            | X          | X      |           |                                |
| Halliday (1973)     |  |            |            |        | X         | X                              |
| Dore(1974)          |  |            |            |        |           | X                              |
| Fantini (1974)      |  |            | X          | X      | X         |                                |
| Celce-Murcia (1975) | X  |            | X          | X      |           |                                |
| Hansen-Bede(1975)   |  |            | X          | X      | X         |                                |
| Yoshida (1976)      |  |            | X          | X      | X         |                                |
| Peck(1976)          | X  |            |            | X      | X         | X                              |
| Huerta (1977)       | X  |            | X          | X      | X         |                                |
| Peters (1977)       |  |            |            | X      |           | X                              |
| Hatch (1978)        |  |            |            |        |           | X                              |
| Matluck (1980)      | X  |            |            | X      |           |                                |

|                                       |  |   |   |   |   |   |
|---------------------------------------|--|---|---|---|---|---|
| Morine Dersheimer, & Tenenber g(1981) |  |   |   |   |   | X |
| McClure (1981)                        |  |   |   |   | X | X |
| Wells (1983)                          |  |   |   |   |   | X |
| Klee(1984)                            |  |   |   | X |   | X |
| Lara(1986)                            |  |   |   |   | X | X |
| Gerhardt (1983)                       |  | X |   |   | X | X |
| Whitehurst & Valdes Menchaca (1989)   |  |   | X |   | X |   |
| Rice & Woodsmall (1988)               |  |   | X |   | X | X |
| Ihns & Leonard (1988)                 |  |   | X | X |   |   |
| Pham (1989)                           |  |   | X |   | X | X |

X: area(s) to which data analyses and research conclusions were related.

*Table 2*  
*Child Language acquisition research and related findings*

| Year    | Researchers  | Languages        | Findings   |
|---------|--------------|------------------|--|
| 1913    | Ronjat       | French/German    | Little evidence of phonological interference.                              |
| 1939-49 | Leopold      | English/German   | No evidence of real bilingualism during the first two years.               |
| 1959    | Burling      | Garo/English     | Evidence of unusual morphological acquisition.                             |
| 1960    | Imedadze     | Russian/Georgian | Concepts learned almost simultaneously when linguistic forms were similar. |
| 1972    | Itoh & Hatch | Japanese/English | Simultaneous as well as sequential acquisition was not                     |

|      |              |   |  |
|------|--------------|---|--|
|      |              |   | an easy process.   |
| 1973 | Halliday     | 1st language  | Children's early communicative system had six functional categories.   |
| 1974 | Dora         | 1st language  | Children's early utterances were realizations of nine primitive speech acts.   |
| 1974 | Fantini      | English/Spanish   | Evidence of strong influence of caretakers' examples upon children's initial attitude toward their bilingualism.   |
| 1975 | Celce Murcia | English/French  | Evidence of avoidance of phonologically difficult words in each language.  |
| 1975 | Hansen Bede  | English/Urdu  | No evidence of first language interference; evidence of similar strategies and rules for acquisition of certain structures in both languages.            |
| 1976 | Yoshida      | Japanese/English  | General nominals had the highest score of all the words acquired; loan-words affected the subject's acquisition of English vocabulary.                   |
| 1976 | Peck         | Child's First Language Child's Second Language Discourse        | Evidence of the repetition or modification of a phonological or syntactic form of the previous utterance to respond relevantly to an utterance.          |
| 1977 | Huerta       | Spanish/English   | Evidence of the powerful impact of the varying linguistic environments; evidence of an alternate use of two languages.                                   |
| 1977 | Peters       | Vietnamese/English  | The "gestalt" style was used in interactions with an older brother. The "analytic" style was used while reading books with the mother.                   |
| 1988 | Lara         | Language competence & reading comprehension of Mexican American | Evidence of correlation between reading achievement and each of these variables: syntactic competence, pragmatic competence, discourse competence in the |

|      |                              |   |   |
|------|------------------------------|---|---|
|      |                              | children  | classroom setting, syntactic competence, pragmatic competence, discourse competence in the playground setting.  |
| 1988 | Gerhardt                     | discourse analysis of English monolingual children                                | Evidence of patterns of co occurrences showing children's sensitivity to discourse factors in their selective use of verb morphology.   |
| 1988 | Whitehurst & Valdes Menchaca | Mexican & American monolingual infants  | Reinforcement is necessary for the acquisition of vocabulary. Reinforcing parental and social environments is necessary for the acquisition of a second language.                 |
| 1988 | Rice & Woodsmall             | English monolingual infant TV viewers   | Evidence of television as a source of language learning for children and as a language teaching device for toddlers' parents  |
| 1988 | Ihns & Leonard               | English monolingual infants acquiring syntactical categories                      | Evidence of children's use of determiners only in correct positions, and of determiner-noun combinations in several different positions.  |
| 1989 | Pham                         | Simultaneous acquisition of English and Vietnamese by a Vietnamese American child | Evidence of two languages functioning as two separate systems and of the impact of parents' and caretakers' involvement in developing functional patterns in infant bilingualism. |

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